

### **REMARKS**

Claims in the case are 1-3, 6, 11, 13, 14 and 19-21, upon entry of this amendment. Claim 1, has been amended, no claims have been added, and no claims have been cancelled herein.

Claims 4, 7-9 and 12 were cancelled in an amendment dated 21 November 2003. Claim 10 was cancelled in an amendment dated 25 May 2003. Claims 5 and 15-18 were previously cancelled in an Amendment dated 19 November 2004. Claims 19-21 were added in an Amendment dated 19 November 2004.

Claim 1 has been amended to include recitation as to the sum of x and y being 100 mole percent. Basis for this amendment is found in original Claim 9 of the application. In addition, Claim 1 has been amended to include Markush language relative to the polymeric azo dyestuffs represented by formulas XIV, XV, XVI and XVIII. Additional amendments to Claim 1 will be discussed further herein.

Page 21 of the specification has been amended to include recitation as to the sum of x and y, of formulas XIII through XX, being 100 mol%. Basis for this amendment to the specification is found in original Claim 9 of the application.

Claims 1-3, 6, 11 and 13-14 stand rejected under 35 U.S.C. § 112, second paragraph. This rejection is respectfully traversed with regard to the amendments herein and the following remarks.

Claim 1 has been amended to include descriptions of R<sup>5</sup>, R<sup>6</sup>, R<sup>7</sup>, R<sup>8</sup>, R<sup>9</sup> and R<sup>10</sup>. Basis for the description of R<sup>5</sup> and R<sup>8</sup> is found at page 7, lines 21-25 of the specification. Basis for the description of R<sup>6</sup> and R<sup>7</sup> is found at page 8, lines 1-3 of the specification. Basis for the descriptions of R<sup>9</sup> and R<sup>10</sup> is found at page 9, lines 25-27 of the specification.

In light of the amendments herein and the preceding remarks, Applicants' claims are deemed to particularly point out and distinctly claim the subject matter which they regard as their invention. Reconsideration and withdrawal of the present rejection is respectfully requested.

Claims 1-3, 5, 6, 10, 11, 14 and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable. The Office Action of 29 March 2005 does not recite a reference upon which this rejection is based. See pages 2 and 3 of the Office Action. Based on the text on page 3 of the Office Action, and in light of previous

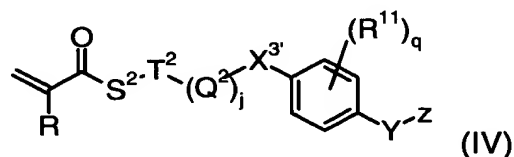
Office Actions, the present rejection appears to be based on DE 197 03 132 A1 (Berneth et al). For purposes of expediency, while at the same time not intending to make any admissions with regard to whether the claims should be rejected over Berneth et al, Applicants will argue the present rejection as though it were based on Berneth et al.

For purposes of clarifying the record, Applicants wish to point out that Claim 18 was previously cancelled in an Amendment dated 19 November 2004.

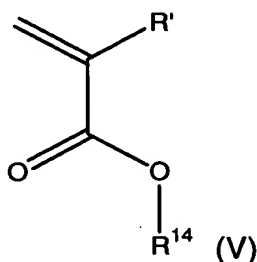
Berneth et al disclose photoaddressable poly(meth)acrylate polymers that are prepared from (meth)acrylate monomers having organic dye groups bonded thereto. See the abstract, page 6, and the polymer formulas of pages 9-15 of Berneth et al.

However, Berneth et al do not disclose, teach or suggest an optical recording material having a thickness of greater than or equal to 1 mm. Berneth et al disclose their photoaddressable poly(meth)acrylate polymers as having thickness of only 0.1 to 100  $\mu\text{m}$ . See page 7, lines 49-50 of Berneth et al.

In addition, Berneth et al do not disclose, teach or suggest an optical recording material that includes a combination of: (a) a polymeric dyestuff selected exclusively from Applicants' formulas XIV, XV, XVI and/or XVIII; and (b) a polymer having form anisotropy containing monomer residues represented by,



and optionally,



wherein the substituents are as defined in Applicants' present Claim 1.

Regarding the comments on page 3 of the Office Action, Applicants wish to point out that the polymeric azo dyestuffs of their present claims are selected exclusively from representative polymer formulas XIV, XV, XVI and XVIII. In

addition, the sum of x and y for the copolymers of formulas XV, XVI and XVIII is 100 mole percent. As presently claimed, terpolymers are not embraced by the polymeric azo dyestuffs of Applicants' present claims.

"Even when obviousness is based on a single prior art reference, there must be a showing of a suggestion or motivation to modify the teachings of that reference." *In re Kotzab*, 217 F.3d 1365, 1370, 55 U.S.P.Q.2d 1313 (Fed. Cir. 2000).

In light of the amendments herein and the preceding remarks, Applicants' claims are deemed to be unobvious and patentable over Berneth et al. Reconsideration and withdrawal of the present rejection is respectfully requested.

Claims 1-3, 6, 11 and 13-14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over United States Patent No. 5,641,846 (**Bieringer et al**) in view of Berneth et al and United States Patent No. 5,384,221 (**Savant et al**). This rejection is respectfully traversed with regard to the amendments herein and the following remarks.

Bieringer et al disclose side-group polymers having photochromic side groups and permanently shape-anisotropic side groups, which include lateral substituents. The polymers of Bieringer et al may be used to fabricate optical components for use with optical data storage and transfer applications. See the abstract and column 2, lines 24-37 of Bieringer et al.

The polymers disclosed by Bieringer et al have a poly(meth)acrylate main chain backbone having covalently bonded side groups branching off therefrom, as represented by their Formulas (I) and (II). See column 2, lines 39-53 of Bieringer et al. Bieringer et al disclose preparing polymers from monomers that already have side groups covalently bonded thereto. See, for example, the monomer formulas at columns 4-7 of Bieringer et al. Bieringer et al does not disclose, teach or suggest covalently attaching side groups to a previously formed polymer backbone.

Berneth et al has been discussed previously herein and discloses photoaddressable poly(meth)acrylate polymers that are prepared from (meth)-acrylate monomers having organic dye groups bonded thereto. See the abstract, page 6, and the polymer formulas of pages 9-15 of Berneth et al. Berneth et al

provide no disclosure, teaching or suggestion with regard to polymers having photochromic side groups covalently bonded thereto.

Savant et al discloses an optical storage medium that includes a transparent polymer and an isomerizable azo dye blended with or covalently bonded to a polymer backbone, after the polymer is formed. See the abstract, and column 8, lines 18-52 of Savant et al. See also Example 5 at column 22, lines 3-39 of Savant et al, wherein an azo dye is covalently bonded to the backbone of an already existing poly(ethylene vinyl alcohol) polymer by means of a condensation reaction between a carboxylic acid group on the azo dye and pendent hydroxyl groups on the poly(ethylene vinyl alcohol) polymer backbone. Savant et al does not disclose or suggest preparing a polymer having azo groups pendent from its backbone, from monomers that already have an azo group bonded thereto.

Bieringer et al disclose polymers that necessarily have photochromic side groups. Berneth et al disclose photoaddressable poly(meth)acrylate polymers that are prepared from (meth)acrylate monomers having organic dye groups bonded thereto. Berneth et al provide no disclosure, teaching or suggestion with regard to polymers having photochromic side groups.

Bieringer et al disclose polymers that are prepared from monomers having azo groups covalently bonded thereto. Bieringer et al provide no disclosure, teaching or suggestion with regard to first preparing a polymer backbone, and then covalently bonding azo side groups thereto. Savant et al disclose a polymer having isomerizable azo dye side groups that are bonded to the polymer backbone after polymer backbone is formed. Savant et al provide no disclosure, teaching or suggestion with regard to polymers prepared from monomer having isomerizable azo dye groups bonded thereto.

Berneth et al disclose photoaddressable poly(meth)acrylate polymers that are prepared from (meth)acrylate monomers having organic dye groups bonded thereto. Berneth et al provide no disclosure, teaching or suggestion with regard to first preparing a polymer backbone, and then covalently bonding organic dye side groups thereto. Savant et al disclose a polymer having isomerizable azo dye side groups

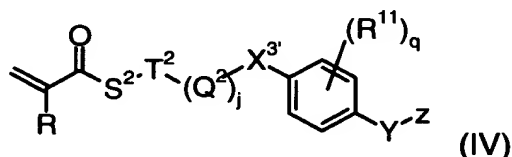
that are bonded to the polymer backbone after polymer backbone is formed. Savant et al provide no disclosure, teaching or suggestion with regard to polymers prepared from monomer having isomerizable azo dye groups bonded thereto.

In light of the preceding remarks, Bieringer et al, Berneth et al and Savant et al do not provide the requisite disclosure that would motivate a skilled artisan to combine and/or modify their disclosures to arrive at Applicants' presently claimed optical recording material. As the Court of Appeals for the Federal Circuit has stated, there are three possible sources for motivation to combine references in a manner that would render claims obvious. These are: (1) the nature of the problem to be solved; (2) the teaching of the prior art; and (3) the knowledge of persons of ordinary skill in the art. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998). The nature of the problem to be solved and the knowledge of persons of ordinary skill in the art are not present here and have not been relied upon in the rejection. As for the teaching of the prior art, the above discussion has established that neither of the patents relied upon in the rejection provide the requisite teaching, and certainly do not provide the motivation or suggestion to combine that is required by Court decisions.

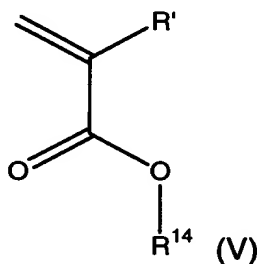
The rejection appears to make impermissible use of hindsight in picking, choosing and discarding from amongst the cited references to arrive at Applicants' claimed optical recording material. The use of hindsight reconstruction of an invention is an illogical and inappropriate process by which to determine patentability, *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998), at 1457. "The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." *In re Fritch*, 972 F.2d 1260, 1266 (Fed. Cir. 1992). Modifying "prior art references without evidence of such a suggestion, teaching or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability -- the essence of hindsight." *In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614 (Fed. Cir. 1999).

Bieringer et al, Berneth et al and Savant et al, either alone or in combination, do not disclose, teach or suggest an optical recording material that includes: (a) a polymer azo dye stuff selected exclusively from homopolymers and copolymers

represented by Applicants' Formulas XIV, XV, XVI and XVII, in which the molar ratio of the copolymer monomer residues (x : y) is from 10 : 90 to 90 : 10, and the sum of x and y is 100 mole percent; and (b) a polymer having form anisotropy containing monomer residues represented by,



and optionally,



wherein the substituents are as defined in Applicants' present Claim 1.

In the third full paragraph on page 4 of the Office Action of 29 March 2005, arguments are made relative to the polymer represented by formula XIX on page 20 of Applicants' specification. Applicants wish to point out that the polymer represented by formula XIX is not encompassed by their present claims. As such, it is respectfully submitted that these arguments are deemed to be moot, in that they do not reach or otherwise touch upon Applicants' present claims. In addition, it is respectfully submitted that these arguments appear to represent an impermissible use of Applicants' specification as prior art.

In light of the amendments herein and the preceding remarks, Applicants' claims are deemed to be unobvious and patentable over Bieringer et al in view of Berneth et al and Savant et al. Reconsideration and withdrawal of the present rejection is respectfully requested.

Claims 1-3, 6, 11, 13, 14 and 19-21 stand provisionally rejected under the judicially created doctrine of double patenting over Claims 1-26 of copending and commonly assigned United States Patent Application No. 10/296,684 (attorney docket number PO-7568) (referred to hereinafter as the '**684 Application**'). This rejection is respectfully traversed with regard to the following remarks.

The block copolymer of the '684 Application includes: at least one block-(A) of at least 3 residues of a C<sub>1</sub>-C<sub>8</sub>-alkyl (meth)acrylate; and at least one block-(B) of monomers containing azo groups. See present Claim 35 of the '684 Application. The polymeric azo dyestuffs (i.e., polymer-(a)) of Applicants' present claims do not contain residues of alkyl (meth)acrylate monomers. In addition, polymer-(b) of Applicants' present claims does not contain residues of monomers containing azo groups.

In light of the preceding remarks, Applicants' present claims are not deemed to be rendered unpatentable under the judicially created doctrine of obviousness-type double patenting over the presently pending claims of the '684 Application. Reconsideration and withdrawal of the present rejection is respectfully requested.

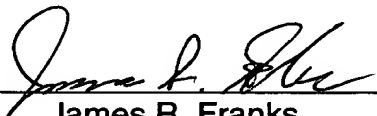
Claims 1-3, 6, 11, 13, 14 and 19-21 stand provisionally rejected under the judicially created doctrine of double patenting over Claims 1-26 of copending and commonly assigned United States Patent Application No. 10/296,683 (attorney docket number PO-7556). This rejection is respectfully traversed with regard to the following remarks and the Terminal Disclaimer included herewith.

Included in Appendix-I herewith is a Terminal Disclaimer relative to copending and commonly assigned United States Patent Application No. 10/296,683. As of an amendment dated 3 March 2005, Claims 4, 6, 11, 14, 16, 17, 30 and 35-39 are pending in United States Patent Application No. 10/296,683.

In light of the Terminal Disclaimer included herewith, the obviousness-type double patenting rejection over Application No. 10/296,683 is deemed to have been overcome. Reconsideration and withdrawal of this rejection is respectfully requested.

In light of the amendments herein and the preceding remarks, Applicants' presently pending claims are deemed to meet all the requirements of 35 U.S.C. § 112, and to define an invention that is unanticipated, unobvious and hence, patentable. Reconsideration of the rejections and allowance of all of the presently pending claims is respectfully requested.

Respectfully submitted,

By   
James R. Franks  
Agent for Applicants  
Reg. No. 42,552

Bayer MaterialScience LLC  
100 Bayer Road  
Pittsburgh, Pennsylvania 15205-9741  
(412) 777-3808  
FACSIMILE PHONE NUMBER:  
(412) 777-3902  
s:\shared\kgb\jrf402am

**APPENDIX-(I)**

**Terminal Disclaimer relative to copending and commonly assigned  
United States Patent Application Serial No. 10/296,683  
(Attorney Docket No. PO-7556).**